

Gold King Mine Discharge

8/10/2015 8/13/2015 8/15/2015

DISSOLVED METALS

| | 8/10/2015 | 8/13/2015 | 8/15/2015 |
|-------------------|-----------|-----------|-----------|
| Aluminum (ug/L) | 35000 | 36000 | 34000 |
| Antimony (ug/L) | 0.5 J | 10 | 3.7 |
| Arsenic (ug/L) | 3.7 | 140 | 44 |
| Barium (ug/L) | 8.9 | 12 | 8.6 |
| Beryllium (ug/L) | 11 | 11 | 11 |
| Cadmium (ug/L) | 65 | 66 B | 82 |
| Calcium (ug/L) | 380000 | 360000 | 370000 B |
| Chromium (ug/L) | 2.7 | 8.6 | 5.5 |
| Cobalt (ug/L) | 110 | 110 | 110 |
| Copper (ug/L) | 6000 E | 6100 E | 4600 E |
| Iron (ug/L) | 120000 | 370000 | 150000 |
| Lead (ug/L) | 32 | 78 | 42 |
| Magnesium (ug/L) | 33000 | 26000 | 27000 |
| Manganese (ug/L) | 33000 E | 34000 E | 36000 |
| Mercury (ug/L) | 0.08 U | 0.08 U | 0.08 U |
| Molybdenum (ug/L) | 0.84 J | 16 | 4.2 |
| Nickel (ug/L) | 72 | 69 | 69 |
| Potassium (ug/L) | 2700 | 2700 | 2400 |
| Selenium (ug/L) | 1.7 JB | 4.8 | 4.7 B ^ |
| Silver (ug/L) | 0.1 U | 0.33 J | 0.1 J |
| Sodium (ug/L) | 3900 | 480 U | 5300 |
| Thallium (ug/L) | 0.32 | 0.35 | 0.29 |
| Vanadium (ug/L) | 2 | 87 | 38 |
| Zinc (ug/L) | 25000 E | 26000 E | 20000 E |

TOTAL METALS AND MISC

| | | | |
|-------------------|---------|---------|----------|
| Alkalinity (mg/L) | NA | 5 U | 5 U |
| Aluminum (ug/L) | 38000 | 36000 | 33000 |
| Antimony (ug/L) | 4.3 | 9.4 | 0.62 J |
| Arsenic (ug/L) | 49 | 130 B | 5.5 |
| Barium (ug/L) | 9.5 | 11 B | 8.7 |
| Beryllium (ug/L) | 11 | 11 | 11 |
| Cadmium (ug/L) | 67 | 68 | 85 |
| Calcium (ug/L) | 380000 | 380000 | 380000 B |
| Chloride (mg/L) | NA | 0.34 J | 0.36 J |
| Chromium (ug/L) | 5.7 | 7 ^ | 3 |
| Cobalt (ug/L) | 120 | 110 | 110 |
| Copper (ug/L) | 6300 E | 6000 E | 4600 E |
| Fluoride (mg/L) | NA | 11 | 10 |
| Iron (ug/L) | 190000 | 310000 | 120000 |
| Lead (ug/L) | 51 | 69 | 29 |
| Magnesium (ug/L) | 28000 | 28000 | 27000 |
| Manganese (ug/L) | 34000 E | 35000 E | 36000 |

| | | | |
|---------------------------|---------|---------|-----------|
| Mercury (ug/L) | 0.08 U | 0.08 U | 0.08 U |
| Molybdenum (ug/L) | 4.8 | 14 | 0.77 J |
| Nickel (ug/L) | 74 | 70 | 72 |
| Nitrate as N (mg/L) | NA | 0.023 U | 0.023 U H |
| pH | NA | 3.06 HF | 2.93 HF |
| Potassium (ug/L) | 2900 | 2700 | 2500 |
| Selenium (ug/L) | 2.5 ^ | 4.3 B^ | 3.3 ^ B |
| Silver (ug/L) | 0.15 J | 0.3 J | 0.1 U |
| Sodium (ug/L) | 4000 | 4800 U | 5200 |
| Sulfate (mg/L) | NA | 1600 | 1600 |
| Thallium (ug/L) | 0.33 | 0.35 | 0.29 |
| Total Hardness (mg/L) | 1100 | 1100 | 1100 |
| Total Suspended Solids (r | 66 | NA | NA |
| Vanadium (ug/L) | 44 | 71 E | 2.5 |
| Zinc (ug/L) | 27000 E | 26000 | 20000 E |

NA Not analyzed

E Result exceeded sample range

U The analyte was analyzed for but not detected

J The result is less than the reporting limit but greater than or equal to the MDL and the con

^ Instrument related QC is outside acceptance limits

centration is an approximate value.

| Pond System Discharge | | | |
|-----------------------|-----------|-----------|-----------|
| DISSOLVED METALS | 8/11/2015 | 8/13/2015 | 8/15/2015 |
| Analyte | Result | Result | Result |
| Aluminum (ug/L) | 8500 | 11000 | 28000 |
| Antimony (ug/L) | 0.4 U | 1.4 | 1.5 |
| Arsenic (ug/L) | 0.37 U | 13 | 16 |
| Barium (ug/L) | 9.4 | 9.1 | 8.5 |
| Beryllium (ug/L) | 3.4 | 3.6 | 9 |
| Cadmium (ug/L) | 80 | 70 B | 80 |
| Calcium (ug/L) | 340000 | 340000 | 350000 B |
| Chromium (ug/L) | 1 U | 1.4 J | 3.3 |
| Cobalt (ug/L) | 100 | 93 | 100 |
| Copper (ug/L) | 2800 | 1800 | 3900 E |
| Iron (ug/L) | 63000 | 90000 | 96000 |
| Lead (ug/L) | 2.6 | 16 | 24 |
| Magnesium (ug/L) | 26000 | 26000 | 26000 |
| Manganese (ug/L) | 30000 E | 29000 E | 31000 |
| Mercury (ug/L) | 0.08 U | 0.08 U | 0.08 U |
| Molybdenum (ug/L) | 0.64 J | 2.2 | 1.4 |
| Nickel (ug/L) | 58 | 55 | 68 |
| Potassium (ug/L) | 2300 | 2300 | 2200 |
| Selenium (ug/L) | 0.58 U | 3.1 | 3.8 B ^ |
| Silver (ug/L) | 0.1 U | 0.11 J | 0.1 U |
| Sodium (ug/L) | 120000 E | 150000 E | 52000 |
| Thallium (ug/L) | 0.25 | 0.25 | 0.23 |
| Vanadium (ug/L) | 0.3 U | 9.7 | 14 |
| Zinc (ug/L) | 22000 E | 19000 E | 18000 E |
| TOTAL METALS AND MISC | | | |
| Alkalinity | 5 U | 5 U | 5 U |
| Aluminum | 21000 | 11000 | 26000 |
| Antimony | 1.3 | 1.3 | 0.4 U |
| Arsenic | 12 | 14 B | 1.2 |
| Barium | 9.5 | 9.3 B | 9 |
| Beryllium | 6.6 | 3.5 | 8.6 |
| Cadmium | 79 | 71 | 84 |
| Calcium | 340000 | 350000 | 360000 B |
| Chloride | 0.9 | 2.8 | 1.2 |
| Chromium | 2.6 | 1.1 J^ | 1 U |
| Cobalt | 99 | 95 | 100 |
| Copper | 3900 E | 1800 | 3800 E |
| Fluoride | 7.2 | 5.5 | 8.9 |
| Iron | 99000 | 87000 | 70000 |
| Lead | 22 | 16 | 11 |
| Magnesium | 26000 | 27000 | 28000 |
| Manganese | 29000 E | 30000 E | 32000 |

| | | | |
|----------------|----------|--------------------|-----------|
| Mercury | 0.08 U | 0.08 U | 0.08 U |
| Molybdenum | 1.6 | 2.3 | 0.45 U |
| Nickel | 60 | 57 | 70 |
| Nitrate as N | 0.046 U | 0.023 U | 0.025 J H |
| pH | 4.59 J | 4.52 HF | 3.19 HF |
| Potassium | 2300 | 2400 | 2200 |
| Selenium | 0.58 U | 3.9 B [^] | 3.2 ^ B |
| Silver | 0.11 J | 0.11 J | 0.1 U |
| Sodium | 120000 E | 140000 | 54000 |
| Sulfate | 1400 | 1400 | 1400 |
| Thallium | 0.27 | 0.27 | 0.23 |
| Total Hardness | 950 | 980 | 1000 |
| Vanadium | 13 | 8.4 | 0.3 U |
| Zinc | 21000 E | 20000 E | 18000 E |

NA Not analyzed

E Result exceeded sample range

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| Location | GKM 8/10/2015 | Ponds 8/11/2015 | % Removal in Ponds | GKM 8/13/2015 | Ponds 8/13/2015 |
|------------------------------|------------------|--------------------|-----------------------|------------------|--------------------|
| DISSOLVED METALS | | | | | |
| Aluminum (ug/L) | 35000 | 8500 | 76% | 36000 | 11000 |
| Antimony (ug/L) | 0.5 | 0.4 U | NA | 10 | 1.4 |
| Arsenic (ug/L) | 3.7 | 0.37 U | NA | 140 | 13 |
| Barium (ug/L) | 8.9 | 9.4 | -6% | 12 | 9.1 |
| Beryllium (ug/L) | 11 | 3.4 | 69% | 11 | 3.6 |
| Cadmium (ug/L) | 65 | 80 | -23% | 66 | 70 |
| Calcium (ug/L) | 380000 | 340000 | 11% | 360000 | 340000 |
| Chromium (ug/L) | 2.7 | 1 U | NA | 8.6 | 1.4 |
| Cobalt (ug/L) | 110 | 100 | 9% | 110 | 93 |
| Copper (ug/L) | 6000 | 2800 | 53% | 6100 | 1800 |
| Iron (ug/L) | 120000 | 63000 | 48% | 370000 | 90000 |
| Lead (ug/L) | 32 | 2.6 | 92% | 78 | 16 |
| Magnesium (ug/L) | 33000 | 26000 | 21% | 26000 | 26000 |
| Manganese (ug/L) | 33000 | 30000 | 9% | 34000 | 29000 |
| Mercury (ug/L) | 0.08 U | 0.08 U | NA | 0.08 U | 0.08 U |
| Molybdenum (ug/L) | 0.84 | 0.64 | 24% | 16 | 2.2 |
| Nickel (ug/L) | 72 | 58 | 19% | 69 | 55 |
| Potassium (ug/L) | 2700 | 2300 | 15% | 2700 | 2300 |
| Selenium (ug/L) | 1.7 | 0.58 U | NA | 4.8 | 3.1 |
| Silver (ug/L) | 0.1 U | 0.1 U | NA | 0.33 | 0.11 |
| Sodium (ug/L) | 3900 | 120000 | -2977% | 480 U | 150000 |
| Thallium (ug/L) | 0.32 | 0.25 | 22% | 0.35 | 0.25 |
| Vanadium (ug/L) | 2 | 0.3 U | NA | 87 | 9.7 |
| Zinc (ug/L) | 25000 | 22000 | 12% | 26000 | 19000 |
| TOTAL METALS AND MISC | | | | | |
| Alkalinity (mg/L) | NA | 5 U | NA | 5 U | 5 U |
| Aluminum (ug/L) | 38000 | 21000 | 45% | 36000 | 11000 |
| Antimony (ug/L) | 4.3 | 1.3 | 70% | 9.4 | 1.3 |
| Arsenic (ug/L) | 49 | 12 | 76% | 130 | 14 |
| Barium (ug/L) | 9.5 | 9.5 | 0% | 11 | 9.3 |
| Beryllium (ug/L) | 11 | 6.6 | 40% | 11 | 3.5 |
| Cadmium (ug/L) | 67 | 79 | -18% | 68 | 71 |
| Calcium (ug/L) | 380000 | 340000 | 11% | 380000 | 350000 |
| Chloride (mg/L) | NA | 0.9 | NA | 0.34 | 2.8 |
| Chromium (ug/L) | 5.7 | 2.6 | 54% | 7 | 1.1 |
| Cobalt (ug/L) | 120 | 99 | 18% | 110 | 95 |
| Copper (ug/L) | 6300 | 3900 | 38% | 6000 | 1800 |
| Fluoride (mg/L) | NA | 7.2 | NA | 11 | 5.5 |
| Iron (ug/L) | 190000 | 99000 | 48% | 310000 | 87000 |
| Lead (ug/L) | 51 | 22 | 57% | 69 | 16 |
| Magnesium (ug/L) | 28000 | 26000 | 7% | 28000 | 27000 |
| Manganese (ug/L) | 34000 | 29000 | 15% | 35000 | 30000 |

| | | | | | |
|-------------------------------|--------|---------|--------|---------|---------|
| Mercury (ug/L) | 0.08 U | 0.08 U | NA | 0.08 U | 0.08 U |
| Molybdenum (ug/L) | 4.8 | 1.6 | 67% | 14 | 2.3 |
| Nickel (ug/L) | 74 | 60 | 19% | 70 | 57 |
| Nitrate as N (mg/L) | NA | 0.046 U | NA | 0.023 U | 0.023 U |
| pH | NA | 4.59 | NA | 3.06 | 4.52 |
| Potassium (ug/L) | 2900 | 2300 | 21% | 2700 | 2400 |
| Selenium (ug/L) | 2.5 | 0.58 U | NA | 4.3 | 3.9 |
| Silver (ug/L) | 0.15 | 0.11 | 27% | 0.3 | 0.11 |
| Sodium (ug/L) | 4000 | 120000 | -2900% | 4800 U | 140000 |
| Sulfate (mg/L) | NA | 1400 | NA | 1600 | 1400 |
| Thallium (ug/L) | 0.33 | 0.27 | 18% | 0.35 | 0.27 |
| Total Hardness (mg/L) | 1100 | 950 | 14% | 1100 | 980 |
| Total Suspended Solids (mg/L) | 66 | NA | NA | NA | NA |
| Vanadium (ug/L) | 44 | 13 | 70% | 71 | 8.4 |
| Zinc (ug/L) | 27000 | 21000 | 22% | 26000 | 20000 |

NA Not analyzed Not analyzed

E Result exceeded Result exceeded sample range

U The analyte was The analyte was analyzed for but not detected

J The result is less than the reporting limit but greater than or equal to the

^ Instrument related QC is outside acceptance limits

| % Removal in Ponds | GKM 8/15/2015 | Ponds 8/15/2015 | % Removal in Ponds |
|--------------------|------------------|--------------------|--------------------|
| 69% | 34000 | 28000 | 18% |
| 86% | 3.7 | 1.5 | 59% |
| 91% | 44 | 16 | 64% |
| 24% | 8.6 | 8.5 | 1% |
| 67% | 11 | 9 | 18% |
| -6% | 82 | 80 | 2% |
| 6% | 370000 | 350000 | 5% |
| 84% | 5.5 | 3.3 | 40% |
| 15% | 110 | 100 | 9% |
| 70% | 4600 | 3900 | 15% |
| 76% | 150000 | 96000 | 36% |
| 79% | 42 | 24 | 43% |
| 0% | 27000 | 26000 | 4% |
| 15% | 36000 | 31000 | 14% |
| NA | 0.08 U | 0.08 U | NA |
| 86% | 4.2 | 1.4 | 67% |
| 20% | 69 | 68 | 1% |
| 15% | 2400 | 2200 | 8% |
| 35% | 4.7 | 3.8 | 19% |
| 67% | 0.1 | 0.1 U | NA |
| NA | 5300 | 52000 | -881% |
| 29% | 0.29 | 0.23 | 21% |
| 89% | 38 | 14 | 63% |
| 27% | 20000 | 18000 | 10% |
| NA | 5 U | 5 U | NA |
| 69% | 33000 | 26000 | 21% |
| 86% | 0.62 | 0.4 U | NA |
| 89% | 5.5 | 1.2 | 78% |
| 15% | 8.7 | 9 | -3% |
| 68% | 11 | 8.6 | 22% |
| -4% | 85 | 84 | 1% |
| 8% | 380000 | 360000 | 5% |
| -724% | 0.36 | 1.2 | -233% |
| 84% | 3 | 1 U | NA |
| 14% | 110 | 100 | 9% |
| 70% | 4600 | 3800 | 17% |
| 50% | 10 | 8.9 | 11% |
| 72% | 120000 | 70000 | 42% |
| 77% | 29 | 11 | 62% |
| 4% | 27000 | 28000 | -4% |
| 14% | 36000 | 32000 | 11% |

| | | | |
|------|---------|--------|-------|
| NA | 0.08 U | 0.08 U | NA |
| 84% | 0.77 | 0.45 U | NA |
| 19% | 72 | 70 | 3% |
| NA | 0.023 U | 0.025 | NA |
| -48% | 2.93 | 3.19 | -9% |
| 11% | 2500 | 2200 | 12% |
| 9% | 3.3 | 3.2 | 3% |
| 63% | 0.1 U | 0.1 U | NA |
| NA | 5200 | 54000 | -938% |
| 13% | 1600 | 1400 | 13% |
| 23% | 0.29 | 0.23 | 21% |
| 11% | 1100 | 1000 | 9% |
| NA | NA | NA | NA |
| 88% | 2.5 | 0.3 U | NA |
| 23% | 20000 | 18000 | 10% |

Additional information on approximate value is approximate value.